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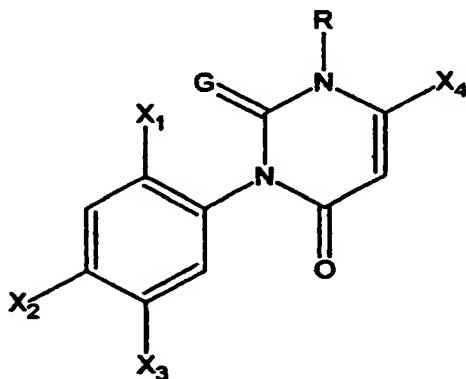
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ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.*

(54) Title: URACILS HAVING A HERBICIDAL ACTIVITY



(I)

(57) Abstract: New uracils are described, having gen-  
eral formula (I) and their use as herbicides.

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/14469

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07D239/54 A01N43/54 C07D403/12 C07D413/12 C07D403/10  
C07D417/10 C07D417/12 C07D239/56 C07D413/10

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07D A01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, CHEM ABS Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 859 229 A (WENGER JEAN ET AL) 22 August 1989 (1989-08-22) cited in the application column 20, line 64 - column 21, line 7; claim 1; example 8	1-28
Y	US 5 084 084 A (SATOW JUN ET AL) 28 January 1992 (1992-01-28) cited in the application claims 1,5; table 3	1-28
A	EP 1 122 244 A (SUMITOMO CHEMICAL CO) 8 August 2001 (2001-08-08) cited in the application the whole document	1-28

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Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

### \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the International filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

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## INTERNATIONAL SEARCH REPORT

International Application No

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 01/77084 A (DREWES MARK WILHELM ; LINKER KARL HEINZ (DE); ANDREE ROLAND (DE); FEUC) 18 October 2001 (2001-10-18) cited in the application the whole document	1-28
Y	EP 1 061 075 A (ROHM & HAAS) 20 December 2000 (2000-12-20) claims 1,5; table 18	1-28
Y	WO 98/27067 A (BAYER AG ; WROBLOWSKY HEINZ JUERGEN (DE)) 25 June 1998 (1998-06-25) page 8, line 5 - line 11; claim 1 page 15, line 22 - line 23	1-28
P,X	WO 03/099009 A (DREWES MARK WILHELM ; HOISCHEN DOROTHEE (DE); LINKER KARL-HEINZ (DE);) 4 December 2003 (2003-12-04) the whole document	1-28
Y	EP 0 563 384 A (NISSAN CHEMICAL IND LTD) 6 October 1993 (1993-10-06) page 61 - page 72; claims 1,3,4; table 1	1-28

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/EP 03/14469

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☒ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:  
1-28 (part, inventions 1 and 3)
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-28 (part)

Compounds of formula I where X3 is Q(CR1R2)nZ- and corresponding compositions and uses  
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2. claims: 1-28 (part)

Compounds of formula I where X3 is Q1Z- and corresponding compositions and uses  
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3. claims: 1-28 (part)

Compounds of formula I where X3 is Q2- and corresponding compositions and uses  
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4. claims: 1-28 (part)

Compounds of formula I where X3 is Y(OC)-CR6=CR5-CR3R4Z- and corresponding compositions and uses  
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# INTERNATIONAL SEARCH REPORT

— information on patent family members

International Application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4859229	A	22-08-1989	AU 604250 B2	13-12-1990
			AU 7637187 A	11-02-1988
			CA 1286662 C	23-07-1991
			CN 87105777 A	06-04-1988
			DK 366887 A	13-05-1988
			EP 0255047 A1	03-02-1988
			HU 44902 A2	30-05-1988
			BR 8703926 A	05-04-1988
			JP 63041466 A	22-02-1988
			ZA 8705466 A	02-02-1988
US 5084084	A	28-01-1992	AT 143017 T	15-10-1996
			AU 627906 B2	03-09-1992
			AU 5884990 A	17-01-1991
			CA 2021005 A1	15-01-1991
			DE 69028582 D1	24-10-1996
			DE 69028582 T2	10-04-1997
			DK 408382 T3	17-02-1997
			EP 0408382 A2	16-01-1991
			ES 2091799 T3	16-11-1996
			GR 3021659 T3	28-02-1997
			KR 163591 B1	01-12-1998
			US 5127935 A	07-07-1992
			US 5154755 A	13-10-1992
			JP 3204865 A	06-09-1991
			AU 643479 B2	18-11-1993
			AU 6858991 A	18-06-1992
			BR 9100196 A	22-10-1991
			CA 2033929 A1	06-06-1992
			CN 1061966 A ,B	17-06-1992
			EP 0489480 A1	10-06-1992
			HU 56554 A2	30-09-1991
			JP 3055268 B2	26-06-2000
			JP 5017453 A	26-01-1993
			KR 163592 B1	01-12-1998
			LV 11176 A	20-04-1996
			LV 11176 B	20-08-1996
			RO 109075 B1	30-11-1994
			RU 2010524 C1	15-04-1994
			RU 2040523 C1	25-07-1995
EP 1122244	A	08-08-2001	AU 1676001 A	16-08-2001
			BR 0100318 A	09-10-2001
			CA 2334399 A1	04-08-2001
			CN 1316426 A	10-10-2001
			EP 1122244 A1	08-08-2001
			JP 2002155061 A	28-05-2002
			US 6537948 B1	25-03-2003
			ZA 200100906 A	08-08-2001
WO 0177084	A	18-10-2001	DE 10016893 A1	18-10-2001
			AU 5473101 A	23-10-2001
			BR 0109784 A	21-01-2003
			CA 2404759 A1	02-10-2002
			CN 1420873 T	28-05-2003
			WO 0177084 A1	18-10-2001
			EP 1272478 A1	08-01-2003
			JP 2003530386 T	14-10-2003

# INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0177084	A		US 2002173425 A1	21-11-2002
			US 2004023805 A1	05-02-2004
EP 1061075	A	20-12-2000	AU 3783100 A	21-12-2000
			BR 0002759 A	30-01-2001
			EP 1061075 A2	20-12-2000
			JP 2001031678 A	06-02-2001
			US 6258751 B1	10-07-2001
WO 9827067	A	25-06-1998	DE 19652433 A1	18-06-1998
			AU 5854598 A	15-07-1998
			BR 9714407 A	18-04-2000
			WO 9827067 A1	25-06-1998
			EP 0946522 A1	06-10-1999
			JP 2001506247 T	15-05-2001
WO 03099009	A	04-12-2003	DE 10223914 A1	11-12-2003
			WO 03099009 A1	04-12-2003
EP 0563384	A	06-10-1993	AT 206405 T	15-10-2001
			AU 9070691 A	22-07-1992
			CA 2097928 A1	18-06-1992
			DE 69132751 D1	08-11-2001
			DE 69132751 T2	01-08-2002
			EP 0563384 A1	06-10-1993
			WO 9211244 A1	09-07-1992
			JP 3089621 B2	18-09-2000
			JP 5186436 A	27-07-1993
			KR 203826 B1	15-06-1999
			US 5356863 A	18-10-1994